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(54) IMPROVEMENTS IN OR RELATING TO CARRIERS FOR WINDSHIELD WIPERS

(71) I, ENNYD HULL, a British Subject, of Fern Cottage, Aberporth, Cardiganshire, formerly of The Old Rectory, Marston, Northwich, Cheshire, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to carriers for windshield wipers.

In United Kingdom Patent Specification 1,212,131, there is described and claimed a windshield wiper comprising an elastomeric blade mounted by a flange in an undercut channel extending along the concave side of a resilient and flexible carrier which is arcuate in its unloaded condition over at least part of its length, whereby when an intermediate zone of the carrier is compressed towards a windshield, substantially the whole length of the blade will be urged into conformity and wiping contact with the windshield.

In a preferred form of the invention in that specification the carrier is of a generally flat rectangular cross-section and has a single continuous undercut channel extending from end to end of the blade carrier. Such a configuration is difficult to mold in the plastics material, such as polypropylene, envisaged, since the continuous undercut channel is not easily released from the mould.

According to the present invention, there is provided a carrier for a windshield wiper blade, the carrier comprising a moulded strip of plastics material, such as polypropylene, which strip is flexible and resilient and of rectangular cross-section, the strip being arcuate in its unloaded condition over at least part of its length so as to present a convex face having attachment means for connection to a wiper arm and a concave face provided with a configuration for attachment of a wiper blade, the said configuration comprising a series of moulded lugs at or near each longitudinal edge of the concave face of the strip, the series of lugs at one edge being parallel to the series of lugs at

the other edge, each lug extending away from the concave face and being inwardly turned to form, with the body of the strip, an undercut zone for receiving a portion of a flange on a wiper blade.

The lugs in one of the series may be positioned in direct opposition to the lugs in the other of the series, but are preferably staggered so that each lug is opposite a space between adjacent lugs of the other series. By this means the carrier may be moulded using intercalated mould halves which are easily separated from the moulded carrier.

The two series of lugs form what may be regarded as an interrupted undercut channel for the flange of the wiper blade.

As well as improving the conditions for moulding of the carrier, the use of an interrupted channel improves the flexibility of the carrier, when compared to a continuous channel.

The invention will be further described with reference to the drawing accompanying the provisional specification in which drawings:—

Figure 1 is a side elevation of a preferred form of carrier according to the invention;

Figure 2 is a bottom plan view of the carrier of Figure 1;

Figure 3 is a view similar to Figure 2, of a modified form of carrier; and

Figure 4 is a section on the line IV—IV of Figure 2 or Figure 3.

The carrier illustrated is basically similar to that described in United Kingdom Patent Specification 1,212,131, and comprises a strip 1 of polypropylene or similar resilient plastics material, which is arcuate in the unloaded state as illustrated in Figure 1, is of rectangular cross-section and has on the convex face an attachment boss 2 for pivotal connection by some suitable means (not shown) to a windshield wiper arm of conventional nature. The actual connection is not part of the present invention but for completeness it is mentioned that it may include a set screw for clamping, or alternatively some form of clip or clamp may be used.

On the concave face, there are provided

FIG. 1

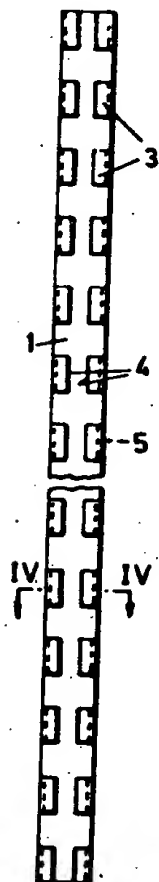


FIG. 3.

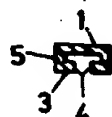


FIG. 4

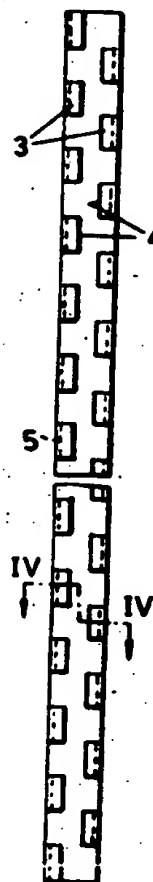


FIG. 2.